

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte EDWARD D. KLOMP,
STEPHEN F. DE NAGEL and
ARUN S. P. SOLOMON

Appeal No. 96-3445
Application 08/233,088¹

ON BRIEF

Before LYDDANE, STAAB and CRAWFORD, Administrative Patent Judges.
CRAWFORD, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 2 and 3. Claims 1 and 4 have been canceled.

¹ Application for patent filed April 25, 1994.

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Appellants' claimed invention is directed to an injector for delivering fuel and air to an engine. Claim 2 is exemplary of the subject matter on appeal and recites:

2. An injector for delivering a charge of fuel and air to an engine, said injector including a body having a central passage extending to a valve seat, a poppet valve secured on a valve stem extending through the central passage and engageable with the valve seat to control flow therethrough, an air inlet opening into the central passage, a fuel nozzle opening into the central passage near the valve seat, a valve periodically metering fuel through the nozzle into the central passage to create a fuel-air charge in the central passage, and an actuator periodically disengaging the poppet valve from the valve seat to deliver the fuel-air charge from the central passage, wherein the valve stem includes a valve disc that sealingly engages the central passage, and wherein the volume of the central passage between the valve seat and the valve disc is in the range of about ten to about twenty times the maximum volume of the fuel delivered through the nozzle during a fuel metering event.

THE REFERENCE

The following reference was relied on by the examiner in a rejection of the claims under 35 USC § 103:

McKay	4,841,942	Jun. 27, 1989
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THE REJECTION

Claims 2 and 3 stand rejected under 35 U.S.C. § 103 over McKay.

The examiner found that the claimed invention differs from the McKay patent by its recitation of a disc valve but that

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McKay discloses a valve element 70 which performs the same function. According to the examiner, it would have been obvious to substitute a well-known disc valve for the valve element in McKay to reduce material costs and reduce the weight of the valve member and increase efficiency.

Rather than reiterate the entire arguments of the appellants and the examiner in support of their respective positions, reference is made to Appellants' Brief (Paper No. 10), Reply Brief (Paper No. 13) and the Examiner's Answer (Paper No. 12) for the full exposition thereof.

OPINION

In reaching our conclusions on the issues raised in this appeal, we have carefully considered appellants' specification and claims, the applied reference, and the respective viewpoints advanced by the appellants and the examiner. As a consequence of our review, we have made the determination that the rejection of claims 2 and 3 should not be sustained. Our reasons for this determination follow.

Initially, we note that an examiner has the initial duty of supplying a factual basis for a rejection under 35 U.S.C. § 103. He may not, because he doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight

reconstruction to supply deficiencies in the factual basis. See In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967).

In the instant case, the examiner is of the opinion that the only difference between the injector of the claimed invention and that of McKay resides in the recitation in claims 2 and 3 of a valve disc. According to the examiner it would have been obvious to substitute a well-known valve disc for the valve element 70 disclosed in McKay (Examiner's Answer at page 2).

The appellants do not challenge the conclusion of the examiner that it would have been obvious to substitute a disc valve for the valve element disclosed in McKay. Appellants argue that McKay does not suggest the subject matter of claims 2 and 3 because McKay does not disclose that:

the volume of the central passage between the valve seat and the valve disc is in the range of about ten to about twenty times the maximum volume of the fuel delivered through the nozzle during a fuel metering event [brief, page 4].

The examiner has stated that the above language is functional language that is related to the volume of the central passage as well as to the method of operation of the fuel injector and that the claims do not positively recite structural limitations that are not obvious from or shown in McKay. To the extent that the examiner views the above quoted language, which

appears in claims 2 and 3, as functional language, we do not agree. In our view, the claims require the injector to be configured such that the volume of the central passage between valve disc 70 and valve seat 26 is in the range of about ten to twenty times the maximum amount of fuel injected during a metering event.

In regard to the McKay disclosure, the examiner is of the opinion that since the fuel fed to the combustion chamber of McKay during a metering event is variable, the McKay injector fulfills the above limitation under the proper conditions such as during idling when the amount of fuel delivered is very small (Examiner's Answer at page 3). However, as McKay does not disclose or suggest any particular relationship between the volume of the central passage and the amount of fuel delivered during a metering event, there is no factual basis for the examiner's finding. As stated W.L. Gore & Assoc., Inc. V. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983) cert. denied, 469 U.S. 952 (1984):

[t]o imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art reference or references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only

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the inventor taught is used against its
teacher.

In our view, the examiner's finding is based on impermissible
hindsight derived from the appellants' disclosure and therefore,
we will not sustain the examiner's rejection of claims 2 and 3
under 35 U.S.C. §103.

The decision of the examiner is reversed.

REVERSED

WILLIAM E. LYDDANE)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
LAWRENCE J. STAAB)	
Administrative Patent Judge)	APPEALS AND
)	
)	INTERFERENCES
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MURRIEL E. CRAWFORD)	
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